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SUBJECT: MISSILE TECHNOLOGY CONTROL REGIME (MTCR): IRAN,S  
BALLISTIC MISSILE PROGRAM

Classified By: ISN/MTR Director Pam Durham.  
Reasons: 1.4 (B), (D), (H).

11. (U) This is an action request. Please see paragraph 2.

12. (S) ACTION REQUEST: Department requests Embassy Paris provide the interagency cleared paper "Iran's Ballistic Missile Program" in paragraph 3 below to the French Missile Technology Control Regime (MTCR) Point of Contact (POC) for distribution to all Partners. Department also requests Embassy London provide paper to the MTCR Information Exchange (IE) Co-Chair (John Andrews), and Embassy Canberra provide paper to the Australian MTCR Plenary Chair for 2008/2009 and/or appropriate staff. Info addressees also may provide to host government officials as appropriate. In delivering paper, posts should indicate that the U.S. is sharing this paper as part of our preparation for the Information Exchange that will be held in conjunction with the MTCR Plenary in Canberra (November 3-7). NOTE: Additional IE papers will be provided via septels. END NOTE.

13. (S) BEGIN TEXT OF PAPER:

(SECRET REL MTCR)

## Iran's Ballistic Missile Program

### Introduction

Iran retains one of the largest and most active missile programs in the developing world. It possesses a sizable number of MTCR Category I and Item 19 missile systems and is developing more capable systems with greater ranges. Iran's improving domestic ballistic missile capabilities raises concerns that it could act as a supplier of ballistic missile technology to other parties. This is especially troubling given Iran's expansion of military cooperation with Syria. Nevertheless, Iran remains reliant on foreign sources for some critical materials, and continues to use its extensive procurement network to acquire these goods from states both within and outside the MTCR.

### Capabilities

Iran is currently involved in researching, developing, and producing multiple ballistic missile systems. Iran produces liquid- and solid propellant short-range ballistic missiles (SRBMs), liquid propellant medium-range ballistic missiles (MRBM), and is developing an MRBM called the Ashura.

Iran's inventory of SRBMs includes the liquid-propellant Scud B and Scud C (which Tehran calls the Shahab-1 and 2

respectively) and the solid-propellant Fateh-110. Iran has moved beyond the point of merely assembling these systems; Iran appears capable of producing many of these missiles' subsystems as well as liquid and solid propellants. Iran's expertise now includes guidance technology -- often the most difficult field for fledgling missile producers to master -- which Iran is marketing to third countries at defense exhibitions and on government websites.

Iran has pursued programs to develop a range of liquid-propellant MRBMs, most building on Scud technology. Iran claims to have delivered the 1,300-km-range Shahab-3 to its military and, as has been discussed at prior MTCR Information Exchange (IE) meetings, already has flight-tested the system multiple times. Recent development efforts have focused on an improved variant of the Shahab-3, often referred to in the press as the Shahab-4 (and in previous IE sessions as the "Shahab-3 Lite"). Iranian officials have claimed that this missile has a range of 2,000-km and is more accurate than the standard Shahab-3. During a military parade in September 2007, Iran displayed a new MRBM, referred to as the Ghadr-1, which Iranian officials claimed had a range of 1,800-km. The missile is seen as a variant of the Shahab-series ballistic missiles, and was seen with a "baby-bottle" or triconic warhead.

Additionally, Iran has probably acquired from North Korea a new liquid-propellant MRBM called the BM-25, which is a variant of a North Korean intermediate-range ballistic missile. This technology would represent a substantial advance in Iran's liquid propellant technology, as the BM-25, derived from the Soviet SS-N-6 ('Serb'//R-27/4K10) submarine-launched ballistic missile (SLBM), utilizes a more advanced engine and more energetic propellants--unsymmetrical dimethylhydrazine (UDMH) and nitrogen tetroxide (N2O4)--than those used in Scud-type missiles. This technology could form the basis for future Iranian missile designs and may be utilized in its Safir space launch vehicle (SLV) design (see following section).

Iran in November 2007 announced it had developed a new ballistic missile called the Ashura which had a range of 2,000-km. Previously, Iran's defense ministry revealed it had conducted some tests related to solid-propellant missile technology, and implied that it was working on a design for a two-stage 2,000-km-range system. The Ashura MRBM last year was launched in Iran and we assess the missile suffered an in-flight failure.

#### Space Launch Vehicle (SLV)

Iran has accelerated its work towards developing a domestic space program, announcing in February 2008 its intent to place a satellite into orbit, presumably utilizing a new two-stage SLV called Safir which Iran displayed for the media. Iran tested the Safir on August 16, 2008. However, despite Tehran's claims that they successfully placed a dummy satellite into orbit, we assess the Safir suffered an in flight failure.

Iran in February 2008 also claimed to have launched a "space probe" called the Kavoshgar-1 on a launch vehicle that appeared very similar to a Shahab-3 MRBM. Despite Iranian claims that the vehicle successfully deployed the space probe, press photos from the launch indicate the launch vehicle malfunctioned shortly after flight.

The successful development of a SLV would provide Iran with much of the technology and experience necessary to produce longer-range ballistic missiles. Tehran could attempt to develop and test much of this technology under the guise of a space program.

#### Support to Foreign Ballistic Missile Programs

As its missile program has advanced, Iran has increasingly been acting as a supplier of missile technology to other states, which could constitute violations of UNSCRs 1737, 1747 and 1803. Iran now offers a number of missile-related

products on the global market, including electromechanical Scud gyros, propellants, and missile-related production facilities.

#### Foreign Procured Materials

Despite Iran's progress, and its overarching goal of self-sufficiency, its ballistic missile program remains reliant on outside sources for a variety of materials. Although some of these materials are available domestically, Tehran has continued to acquire these goods abroad. This may be because the missile program does not trust the quality of indigenously produced goods and therefore cannot reliably sustain its missile development efforts without foreign sources of supply.

Much of Iran's vulnerability still lies in the field of advanced materials and Iranian ballistic missile entities continue to seek specialized steels and aluminum from foreign suppliers. These materials are often sought to produce ballistic missile airframes due to their high-strength, low weight, and corrosion resistant properties, and are suitable for Iran's Shahab series of missiles.

Iran's need for graphite also appears to persist, as Iranian missile entities in 2007 continued to seek graphite in various forms. High quality graphite could be used to produce nose cone tips, nozzle throat inserts, and jet vanes for Iran's Scud-based ballistic missiles or its solid-propellant missiles. Lower-grade graphite could still contribute to the ballistic missile program through its use in machining processes or metals production.

In addition to items controlled by the MTCR, Iran continues to seek less sensitive items widely available on the international market or less likely to be subject to export control restrictions. For example, Iran sought quantities of sodium perchlorate from suppliers in China in 2008. Sodium perchlorate is not controlled by the MTCR, but can be used in the production of ammonium perchlorate, the common solid propellant oxidizer listed on the MTCR Annex.

#### Procurement Infrastructure and Front Companies

The Aerospace Industries Organization (AIO), an Iranian Ministry of Defense and Armed Forces Logistics subordinate entity, was created in 1998, and oversees all of Iran's missile-related research, development, and production efforts. This supervision includes ballistic missiles, as well as surface-to-air systems, anti-tank guided rockets, and anti-ship cruise missiles. The key missile-related AIO subordinates are: the Shahid Hemmat Industrial Group (SHIG), the organization responsible for development and production of liquid-propellant based ballistic missiles; the Shahid Bakeri Industrial Group (SBIG), the organization responsible for development and production of solid-propellant based ballistic missiles and rockets; and the Fajr Industrial Group (FIG), the organization responsible for the development of ballistic missile guidance systems.

As has been discussed extensively in previous MTCR IE sessions, these organizations often use an elaborate set of front companies to hide their involvement with AIO and the actual nature of their procurement. The following front companies are commonly used as procurement covers for AIO and its subordinate organizations in dealings with technology suppliers outside of Iran:

- Ettehad Technical Group
- Everend Asia Company
- Helal Co
- Joza Industrial Co
- Mahestan (Import and Export) Co.
- Mehr Engineering and Industrial Group
- Mizan Machine Manufacturing Group (3MG)
- Pejman Industrial Services Corp
- Safety Equipment Procurement (S.E.P. Inc)
- Sahand Aluminum Parts Industrial Company (SAPICO)

--Tiz Pars Technical and Engineering Company  
--Ecxir Trading Company  
--Sabalan Co.  
--Baharan Factories Group  
--RAFIZCO  
--Noavin Ltd.  
--Pars Novin Industrial Company  
--Parto Angizan Company  
--South Industrial Power  
--Aban Commercial and Industrial Group  
--Pooya Commercial and Engineering Co.  
--Selm Commercial Co.  
--Saba Machinery Supplying Co.

It is important to note that other AIO-affiliated organizations involved in non-ballistic missile enterprises also may share resources and technology with SHIG, SBIG, and FIG. These entities include the Sanam Industrial Group, Sanam Projects Management (SPM), and Ya Mahdi Industries Group. Transfers of raw materials and machinery to these entities may contribute to Iran's production of MTCR Category I missile systems.

In addition to the various companies linked to AIO, we also believe that the following Iranian entities have engaged in procurement activities for Iran's WMD/missile/conventional arms programs:

Electro Sanam Company (E.S. Company)  
Instrumentation Factories Plan  
Iran Cement Engineering and Parts (ICEP) Co. Ltd.  
Kaveh Cutting Company  
M. Babaie Industries  
Missile Industries Group  
Motlagh Industrial Factory  
Parchin Missile Industries  
Sanam Industrial Group  
Sanam Projects Management (SPM)  
Schiller Novin  
Shafizadeh Industries  
Shahabadi Industries  
Shahid Babaie Industries Complex (SBIC)  
Shiveh Tolid Company  
State Purchasing Office (SPO)

These entities, in addition to a global network of procurement agents and fictitious end-users, provide Iran with access to dual-use goods, raw materials, and critical technologies for its ballistic missile programs that would otherwise be unavailable.

#### Outlook

Current Iranian programs appear focused on increasing the capability and range of Iran's ballistic missiles forces. Iran's current development of an SLV also raises many concerns: the successful development of a SLV would provide Iran with much of the technology and experience necessary to produce longer-range ballistic missiles, including an Intercontinental Ballistic Missile (ICBM). Tehran could attempt to develop and test much of this missile technology under the guise of a space program. We assess that, with continued foreign assistance, Iran could develop an ICBM capable of reaching the U.S. and all of Europe by 2015, if it chooses to do so.

However, Iran remains dependent on foreign assistance to affect Iran's ability to acquire critical materials for its ballistic missile programs. A key challenge to MTCR Partners is to ensure that Iran does not gain access to the technologies - controlled and uncontrolled -- it needs to develop longer-range missiles. Sharing information with Partners in the IE, bilaterally, and in other multilateral forums will be critical in preventing Iran's missile acquisition efforts.

END TEXT OF PAPER.

14. (U) Please slug any reporting on this or other MTCR issues for ISN/MTR. A word version of this document will be posted at [www.state.sgov.gov/demarche](http://www.state.sgov.gov/demarche).

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